NOTE XI.

PYGIOPSYLLA ROBINSONI (ROTHSCHILD) ♂

BY

Dr. A. C. OUDEMANS.

(With 1 text-figure).

The female of this species has been described by the Hon. N. C. Rothschild in Novitates Zoologicae, Vol. 12, p. 483 (pl. XIII, fig. 6). The author states that it is allied to *Ceratophyllus ahalae* Rothsch., and indeed the head of the ♂ of this species, judging from the figure given by the British Suctoriologist in Novit. Zool. Vol. 11, pl. XI, fig. 51, resembles that of the present species as two peas. The male apparatus, however, differs, though not widely.

Head. The antennal groove, which is closed behind, reaches far dorsally, so that it is very near the vertex. The grooves are united by a very fine but distinct seam. In the anterior part of the head there are three *eyelike organs*, two near the fore margin, one above the implantation of the maxillary palp and behind the foremost row of bristles. In the posterior part of the head there are also three eyelike organs, two near the dorsal margin, and one above the middle of the antennal club and behind the foremost row of bristles. The foremost portion of the anterior part and that of the posterior part of the head are finely punctured i. e. provided with numerous extremely fine and minute *hairs*. Then follows in the anterior part an oblique row of six heavy bristles, behind which one observes a second row of four ditto; then between this row and the eye, eight heavy bristles irregularly placed. The *eye* itself is ellipsoidal; its fore half is brown, its hind half black; its fore half

projects a little into the antennal groove. The *gena* is provided with a rounded transparent piece.

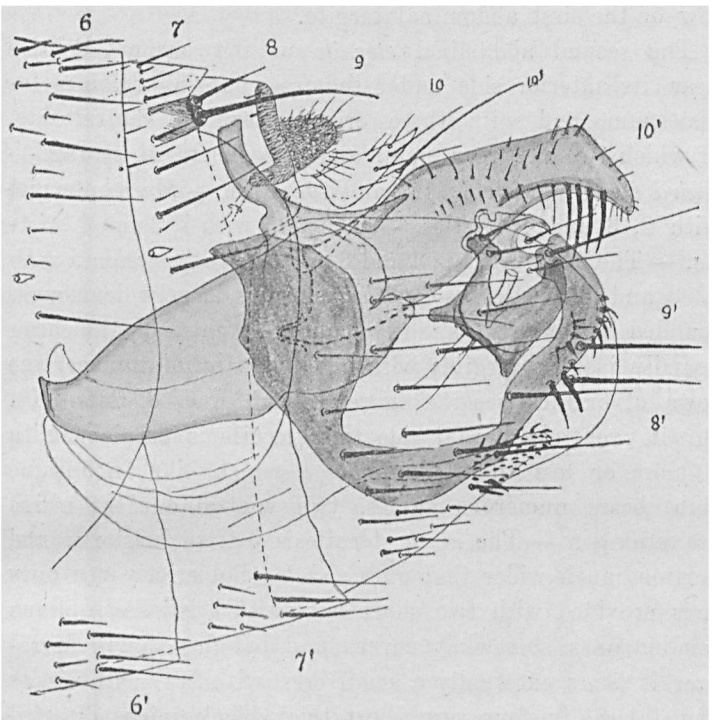
The *pronotum* bears a comb of 2×10 teeth; these are black, whilst a tooth-like piece of the pronotum itself is transparent and flanks the comb laterally. Before the comb a row of 2×6 bristles, alternating with shorter ones. Before this row, on the back, a row of 2×4 bristles, which are a little stronger and longer than the shorter ones just quoted.

Mesonotum with a broad brown collar without any indication of teeth. It bears moreover 4 or 5 transverse somewhat oblique rows of bristles, of which the foremost are the shortest, the hindmost (5 in number) the longest and strongest, alternating with shorter ones. Just above the chitinous incrassation of the mesopleurum a strong bristle is present.

On the *metanotum* one observes an oblique transverse row of 5 strong and long bristles; a sixth bristle in the same row stands on the squamous appendix; the long ones alternate with shorter ones. Before this row an oblique one of 9 shorter bristles; still more orad is a more dorsal row of 4 shorter bristles.

First *abdominal tergite* with three rows of bristles (3, 6, 8). — The second to the fifth tergite each with two rows (7, 14), and with a black apical tooth near the dorsum. — The sixth and seventh tergite each with two rows (about 5 and 14); the last moreover with two heavy antepygidial bristles, of which the lower one is about two times longer than the dorsal one. They stand together on an apical, darker coloured double cone, which is at the bottom of a wide incision in the free hindmargin or collar of the tergite. — Eighth tergite small, ventrally-posteriorly rounded; its stigma with ⌋-shaped peritrema, which reaches the median line of the back. — Ninth tergite for the greater part consisting of the almost semi-ellipsoidal senseplate, behind which there is, however, a sharply edged nail-shaped piece, which bears 5 bristles on its edge. — Tenth tergite or sub-

anal plate of usual shape, ventrally-anteriorly rounded, provided with 7 bristles.



Modified segments of *Pygiopsylla robinsoni* (Rothsch.) ♂.

Propleurum of usual shape, reaching anteriorly nearly the front of the eye.

Mesopleurum almost triangular, its top upwards, its anterior angle truncated. *Mesepisternum* with one stronger and three shorter bristles in its basal-posterior angle. *Mesepimerum* with two transverse rows of 3 bristles each; the posterior row on the free blade that partly covers the metanotal squama and the metepisternum.

Metapleurum. *Metasternum* anteriorly-ventrally rounded, anteriorly with 2×2 minute hairs. *Metepisternum* with one strong bristle near the dorsal side. The *metepisternum* reaching far dorsad, with its stigma on its posterior side; it is provided with 3 transverse rows of 4, 4 and 3 bristles;

the latter being stronger, alternating with shorter ones and the row itself a lateral continuation of the hindmost row of the first abdominal tergite.

The second abdominal *sternite* with two short bristles near its anterior side under the free margin of the metepisternum, and with three bristles near the ventral side, of which two are very small and one short but strong. — *Third* sternite with 1, 1, 2 and 4 bristles. — *Fourth* sternite with 2, 3 and 4 bristles. — The *fifth* with 1, 3 and 4 bristles. — The *sixth* with 2, 4 and 3 bristles. — The *seventh* with 2, 3 and 3 bristles. — *Eighth* sternite largely developed, rounded posteriorly, slightly concave ventrally, touching dorsally just its tergite; with about five irregular transverse rows of bristles (see the figure) (about 5, 6, 8, 8 and 5). On its ventral internal side this sternite is provided with a more or less rodlike *appendage,* which, like an antique club, bears numerous spines, two ventral ones of which are stronger. — The *ninth* sternite is in its anterior dorsal portion much wider than in *C. ahalae.* Posteriorly-ventrally it is provided with two short but stout bristles and seven smaller ones somewhat curved and hanging down. Moreover it bears externally a small crest with five small bristles and internally four very short thick black spines directed backward. The *penis* or appendage of this sternite is only roughly sketched in my figure. One observes the posterior tubular end of it and the pruning-knife-shaped anterior end. The posterior end is armed (on each side) with an almost quadrangular chitinous organ, and a less chitinized piece like the beak of a parrot. — If we consider the *tenth* sternite as being divided into two pieces, viz. the subanal plate and the greater part of the clasping apparatus, I think we are near the truth. Then the „finger" is a modified „cercus" and identical with the female „cercus" (erroneously sometimes called „stylus"). The subanal plate only bears an apical strong bristle. The manubrium of the clasping apparatus is more or less pruning-knife-shaped; its dorsal prolongation more or less rasor-shaped, and the „clasper" itself

short, bluntly rounded and provided with two hairs. The „finger" is like that of *ahalae*, but its bristly armature somewhat modified. Externally it has about 18 dorsad directed small hairs and a row of about 14 ventrad directed hairs, increasing caudad in length and strength; four of them are obviously strong and black. The top of the finger, directed downward, is also provided with a few small hairs. Obviously this „finger" does not clasp with the clasper, but with the ninth sternite!

Rostrum (mandibles + labial palps) long, reaching the protrochanter. Maxillae sharp. Maxillary palps formula 4, 1 = 2, 3. Labial palps formula 5, 1, 4, 3, 2, symmetrical.

Foreleg. Externally: coxa polystich, with strong bristles. — Trochanter with one anterior bristle; femur with one proximal anterior bristle, two distal anterior ones, about ten posterior ones, the distal one heavy, exteriorly about eight bristles. — Tibia with 3 anterior bristles in the distal half, two thick ones in the anterior distal angle, six posterior notches each with two stout bristles; moreover about 12 external bristles. — Tarsus formula 5, 1, 2, 3, 4; all the joints well covered with bristles. Last joint with one subbasal, two submedial and four subapical strong spines, four lateral ones of which the first is stronger; planta hairy. *Internally*: trochanter with two bristles near the anterior one; femur with one bristle in the proximal half; tibia with one in the anterior distal angle; tarsus, last joint with 3 lateral and one medial apical one.

Midleg. Externally: coxa with distinct demarcation between basi- and telocoxa; the latter with a row of about 7 small bristles in the distal half of the anterior edge, of which the distal one strong and double; parallel to this row a marginal row of about 5 of the same shape; quite distally and posteriorly, before the well-rounded notch, two bristles. — Trochanter with one bristle on the anterior edge. — Femur with two bristles on the proximal anterior protuberance; three on the anterior distal margin; about 12 on the posterior edge, of which the distal one heavy;

parallel to the four distal bristles of this row a marginal row of 4, of which the distal one heavy; near this latter two smaller ones. — Tibia like the protibia. — Tarsus formula 1, 5, 2, 3, 4; as for the rest like the protarsus. *Internally*: coxa with 5 minute hairs in its anterior proximal angle; femur bare; the rest of the leg like in the foreleg.

Hindleg. Externally: coxa with 3 minute hairs on the proximal edge before the implantation; a row of about 10 bristles on the anterior edge, the distal one being double; parallel to this row about four marginal rows, each of about 6 bristles of the same shape, and three minute hairs on the proximal edge behind the implantation. — Trochanter with one and two bristles on the anterior edge, and two smaller ones exteriorly. — Femur with two bristles on the anterior proximal protuberance, behind which there is a smaller one; two or three bristles on the distal anterior margin; about 15 bristles on the posterior edge, of which the distal one heavy; parallel to the last four of this row a marginal row of four bristles of which the distal one short, thick and almost black; near this spine two small bristles. — Tibia with 7 notches and double bristles, as for the rest like the pro- and mesotibia. — Tarsus formula 1, 2, 3, 5, 4, the first joint as long as the last three together; the last joint *differs from those of the other legs* in having the subbasal and submedial bristles removed so far laterally that in fact there are 6 lateral bristles; the first three joints thicker and bearing only two subapical bristles.

Length of ♂ 2,6 to 2,8 mm. — Two ♀♀ and two ♂♂ were found in a nest of *Sciurus notatus* Bodd. by Mr. Edw. Jacobson in Batavia, Aug. 1908. The nest was made in a cocoa-tree. One pair is in the Leyden Museum, the other in my collection.

Arnhem, September 1909.